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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,280

12/08/2006

Winfried Bunsmann

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9540

40570

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08/25/2009

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EXAMINER

VANAMAN, FRANK BENNETT

ART UNIT

PAPER NUMBER

3618

MAIL DATE

DELIVERY MODE

08/25/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,280	Applicant(s) BUNSMANN ET AL.	
	Examiner Frank B. Vanaman	Art Unit 3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/11/06</u> . | 6) <input type="checkbox"/> Other: ____. |

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The abstract of the disclosure is objected to because the phrase "the invention relates to" (lines 1-2) is redundant and because legal phraseology such as "said" (line 9) should be avoided. Correction is required. See MPEP § 608.01(b).
3. The specification lacks the headings preferred in the framing of a U.S. Patent Application:

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

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4. The abstract of the disclosure is objected to because it contains references to specific claims (see page 1, first paragraph; page 3, lines 3-8, page 3, line 11, etc.). These references should be deleted in that the contents of the claims may be changed by amendment, and/or claims may be deleted and/or claims may be renumbered at the time of allowance, making such references in the specification confusing and/or incorrect. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

5. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, lines 1-2 and claims 12 lines 1-2, the phrase "especially" renders the claims indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). In claims 3-6, the further recitation of "an energy converter" is confusing in that "an energy converter" has been previously recited in claim 1, line 7, and as such, it is not clear whether the subsequent recitation refers to the previous converter or another converter; in claim 7, lines 2-3, "the energy storage device" lacks a clear antecedent basis (note that this claim has been specifically amended by applicant to depend from claim 5, rather than claim 2); in claim 10, line 4, it is not clear what specific attributes a "suitable" stress possesses.

Claim Rejections - 35 USC § 103

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 8, 9 and 12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Browne et al. (US 3,211,491). Browne et al. teach a motor vehicle (11) having a body (12, 13, 14) which may be convertible (e.g., from an open to a closed configuration, by opening or closing doors and/or windows), and has at least one strut (19) which can move longitudinally relative to the body as a result of longitudinal stress and/or deformation of the body, including plural parts which move with respect to each other (21, 22) and extend over at least almost the entire strut (note figure 1), the portions movable with respect to an energy converter (26) which at least partially converts kinetic energy of motion into another form of energy (e.g., heat due to internal friction associated with the deformation of the converter). Alternatively, Browne et al. fail to teach the vehicle being a convertible in a more limiting sense of the term, in that a roof portion is removable and fail to explicitly teach that the resilient material which deforms and generates heat in response to the deformation. It is old and well known to provide vehicles with removable top portions to facilitate the enjoyment of users of the vehicle in favorable weather conditions, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the vehicle 'especially' as a convertible so as to allow users of the vehicle to operate it without the roof in weather conditions where such operation is desired. As regards the conversion of kinetic energy to heat, note that deformation of a material results when the internal friction of the constituents of the material is overcome, and it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the converter (26) as a material having a non-zero internal friction for the purpose of ensuring that the converter delivers a reaction force which actually provides a damping characteristic, so as to damp the vibration that the strut is taught to damp.
8. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Browne et al. (cited above). The reference to Browne et al. is discussed above.

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As regards claim 10, the reference to Browne et al. fails to specifically teach that the movement of the relatively movable parts of the converter "can be more than a millimeter". Where a general condition is taught (in this case, the relative movement between the members), an adjustment of the magnitude of the condition is known to be within the skill of the ordinary practitioner, at least when such an adjustment yields a predictable result. In this case, it would have been obvious to one of ordinary skill in the art at the time of the invention to allow the motion of the relatively movable parts to be more than a millimeter in order to facilitate damping of higher amplitude vibrations which result in relative body motion of a magnitude greater than one millimeter, such as the damping of vibration associated with a very rough road or badly balanced tire.

As regards claim 11, the reference to Browne et al. fails to specifically teach the use of a common energy converter to which more than one strut is connected. Browne et al. do teach that the strut portions closer to the vehicle cabin (away from the viewer, figure 1) are mounted close to one another, and in that it is well held in the mechanical arts to be within the skill of the ordinary practitioner to (1) reposition an already taught element and to (2) integrate plural elements into a single element, it would firstly have been obvious to one of ordinary skill in the art at the time of the invention to reposition the converter portions of the struts proximate one end of each strut taught by Browne et al. such as proximate the vehicle cabin, for the purpose of reducing the size of the strut portion which is located over the open compartment, thus allowing improved access to the contents of the compartment, such as the engine and in that such a repositioning would place the converter portions very closely proximate one another, it would secondly have been obvious to one of ordinary skill in the art at the time of the invention to integrate both converters into a single assembly which mounts the cabin end portions of each strut, for the purpose of condensing the space required to locate and mount the converters (in that both converters would be mounted in a common single housing or on a common single mount) and reducing the number of parts required to mount the struts at their respective ends proximate the cabin.

9. Claims 2 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Browne et al. in view of Margolis (US 5,570,286). The reference to Browne et al. is

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discussed above and fails to teach the energy converter as being connected to an energy storage device, including a pressure medium reservoir which may be compressed by a moving part, or a coil that is penetrated by a moving part of the strut. Margolis teach that it is well known to provide different types of converters for absorbing relative motion between movable portions of a strut (note strut and converter assemblies 104, 114, 20a, 20b, 20c, 47, 47', Etc), which are connected to an energy storage device (32, or 78, or 92), the arrangement optionally including at least a pressure medium reservoir (67, 68, 67', 68' or 94, 95) which can be compressed by a moving part (70, or 70', or 96), and/or wherein fluid can be moved by the moving part (70, 71), and/or wherein a coil arrangement (44) is penetrated by a magnet (42) to generate electricity (to be stored in 32). It would have been obvious to one of ordinary skill in the art at the time of the invention to use one of the alternative converter devices as taught by Margolis (and which may be alternatively usable) - the compressible reservoir, the fluid moving reservoir or the electrical coil arrangement, in place of the arrangement taught by Browne et al. which does not capture the dissipated energy, for the purpose of capturing the energy associated with the deformation, facilitating more efficient vehicle operation rather than wasting the energy which has been dissipated. As regards claim 7, the reference to Margolis teaches that the storage device (32) may be a capacitor, but does not explicitly teach that the device is a battery. In that it is well known to use a battery to store captured energy for extended periods of time, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the storage device taught by Margolis as a battery, rather than a capacitor, for the purpose of facilitating longer term storage of the captured energy.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Browne et al. in view of Riad (US 5,934,419). The reference to Browne et al. is discussed above and fails to teach the use of a contact brake surface which engages a moving part to provide external frictional damping. Riad teaches that it is well known in the art of vibration damping to use a frictional damping device including a moving part (109, 110) which is frictionally engaged with a strut portion (interior of 101) to damp vibration, the arrangement taught to be beneficial to conditions involving sudden movement between

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the relatively movable parts. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the converter portion taught by Browne et al. as an external frictional absorber, including two relatively movable elements which are frictionally engaged with each other, as taught by Riad, for the purpose of providing a beneficially improved damping for high speed, high amplitude vibrations (i.e., characterized by the vibration amplitude with time having a very steep slope).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lewus (US 4,295,538), Lessler (US 4,900,054), Caires (US 5,590,754), Seeliger et al. (US 6,206,460), Song et al. (US 6,920,951) and Beaulieu et al. (US 2006/0125325) teach devices and arrangements of pertinence.

12. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A response to this action should be mailed to:

Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,

Or faxed to:

PTO Central Fax: 571-273-8300

F. VANAMAN
Primary Examiner
Art Unit 3618

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